

RemarksClaim Rejections - 35 U.S.C. § 112 ¶ 2

Claims 5 and 7-10 stand rejected under 35 U.S.C. § 112 ¶ 2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the above-reference Office Action stated that in claim 5 the two occurrences of the term "the memory controller" lacked antecedent basis. Claim 1 has been amended to provide an antecedent basis for the term "the memory controller" in claim 5.

Similarly, the above-referenced Office Action stated that in claim 7 the two occurrences of "the microcontroller" lacked antecedent basis. Claim 7 has been amended to replace the term "the microcontroller" with the term "the memory control means," which has an antecedent basis in claim 7. Applicant therefore respectfully requests that the rejection of claims 5 and 7-10 under 35 U.S.C. § 112 ¶ 2 be withdrawn.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 1-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over admitted prior art FIG. 1 of the present application in view of Dye et al. (U.S. Pat. No. 6,208,273). For

the reasons set forth below, Applicant traverses the rejection and respectfully requests that it be withdrawn.

Claim 1 of the present application is directed to a computer system. The computer system includes "a system fabric." As described, for example, at p. 4, lines 17-22 of the present application, a system fabric includes those components of a computer system which enable cell boards to communicate with each other. The computer system of claim 1 also includes a "memory controller" and a "fabric agent chip coupled between the memory controller and the system fabric." As described, for example, at p. 4, lines 23-29 of the present application, a fabric agent chip acts as an interface between a cell board and other cell boards in a computer system.

The computer system of claim 1 of the present application also includes "a compression/decompression (codec) engine coupled between the memory controller and the fabric agent chip." FIG. 1 of the present application neither teaches nor suggests the inclusion of a codec engine.

The Office Action states that Dye discloses a compression-decompression function, and that it would have been obvious to combine the compression/decompression technology taught by Dye with the system illustrated in FIG. 1 of the present application. Combining Dye's compression and decompression unit 251 (shown, for example, in FIGS. 7 and 8 of Dye) with FIG. 1 of the present

application, however, would not result in a computer system having all of the limitations of claims 1-26 of the present application as currently presented.

As shown in FIG. 7 of Dye and as described generally at col. 19, lines 7-48 of Dye, switch logic 261 of the memory controller 220 receives data on data bus 216. As shown in FIG. 8 and as described generally at col. 20, line 54 through col. 22, line 48 of Dye, this uncompressed data pass through crossbar switch 502. If such data are to be compressed, they pass through compress switch 516 and are compressed by compression engine 570 or lossy compression engine 575. Compressed data are transmitted to and stored in DRAM 594. When compressed data are read from the DRAM 594, they are decompressed by decompression engine 550 or lossy decompression engine 555 before passing through decompress switch 512. The decompressed data are then transmitted through crossbar switch 502. In other words, data are compressed only *within* the memory controller 220, and only *uncompressed data* (whether it be uncompressed data received over the data bus 216 or data that are decompressed after being retrieved from the DRAM 594) pass through the crossbar switch 502, even when the compression and decompression unit 251 performs compression and decompression on data.

In contrast, in the computer system of claim 1 of the present application, the compression/decompression engine is coupled between

the memory controller and the fabric agent chip. For example, in FIG. 3 of the present application, compression/decompression engine 320a is coupled between memory controller 110a and fabric agent chip 114a. *Uncompressed* data read from the memory 112a by the memory controller 110a and transmitted to the fabric agent chip 114a may be compressed by the compression/decompression engine 320a, and the *compressed* data may be transmitted through the crossbar switch 116 (see, e.g., p.7, lines 11-14). This is the opposite of the function performed by the compression and decompression unit 251 of Dye, which reads *compressed* data from memory (DRAM 594) and *decompresses* the data before sending the *decompressed* data through the crossbar switch 502.

Conversely, for example, in FIG. 3 of the present application, *compressed* data received over the crossbar switch 116 by the fabric agent chip 114a may be *decompressed*, and the *decompressed* data may be transmitted to the memory controller 110a for storage in the memory 112a. This is the opposite of the function performed by the compression and decompression unit 251 of Dye, which receives *uncompressed* data through the crossbar switch 502 and *compresses* the data before storing the *compressed* data in the memory (DRAM 594).

Claims 1-26 of the present application, as currently presented, all include at least one of the following limitations, or substantially similar limitations: (1) compressing communications

and transmitting the compressed communications over a system fabric;
and (2) receiving compressed communications over a system fabric and
decompressing the compressed communications. Combining the
compression and decompression unit 251 of Dye with the system 100
illustrated in FIG. 1 of the present application would not result in
a computer system having either of these features. Rather, it would
result in a computer system which decompresses communications before
transmitting them over a crossbar switch, and which compresses
communications after receiving them over a crossbar switch. Claims
1-26 of the present application therefore patentably distinguish
over the combination asserted in the Office Action. For this
reason, Applicant traverses the rejection of claims 1-26 and
respectfully requests that it be withdrawn.

If this response is not considered timely filed and if a request for extension of time is otherwise absent, applicant hereby requests any extension of time. Please charge any fees or make any credits, to Deposit Account No. 08-2025.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert Plotkin", is written over a horizontal line.

Robert Plotkin, Esq.

Reg. No. 43,861

11/12/2004
Date

Robert Plotkin, P.C.
45 Butternut Circle
Concord, MA 01742-1937
Tel: (978) 318-9914
Fax: (978) 318-9060